

bit stream down to a sampling frequency that is nominally equivalent to twice a power line frequency.

Claim 19 (original): The proximity monitoring system of Claim 16 wherein said I and Q baseband converter is a switching mixer.

Claim 20 (previously amended): The proximity monitoring system of Claim 16 wherein said receiver further includes an analog-to-digital converter in electrical communication with said I and Q baseband converter, said receiver module further comprising a digital signal processor in electrical communication with said analog-to-digital converter, said analog-to-digital converter producing an digital I and Q baseband signal from an output of said I and Q baseband converter.

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Claim 21 (original): The proximity monitoring system of Claim 20 wherein said digital signal processor extracts each of ^a said first magnetic field component, ^a ~~said~~ second magnetic field component, and ^a ~~said~~ third magnetic field component from said digital I and Q baseband signal.

Claim 22 (original): The proximity monitoring system of Claim 21 wherein said receiver module is carried by a pet, said receiver module further comprising a stimulus delivery system for applying a deterrent stimulus to the pet when the pet approaches said boundary.

Claim 23 (original): The proximity monitoring system of Claim 16 wherein said receiver includes detection logic to detect an unusually rapid decrease in said total power of said magnetic field incident at said antenna array thereby indicating a loss of power to said transmitter.

Claim 24 (cancelled)

Claim 25 (cancelled)

Claim 26 (cancelled)

Claim 27 (cancelled)